

(FILE 'HOME' ENTERED AT 17:48:47 ON 05 APR 2002)

FILE 'CAPLUS' ENTERED AT 17:48:58 ON 05 APR 2002

FILE 'REGISTRY' ENTERED AT 17:49:35 ON 05 APR 2002

L1 3 S 96751-61-0 OR 103774-40-9 OR 230309-92-9  
L2 6 S 230309-92-9 OR 230309-93-0 OR 230309-94-1 OR 230309-95-2 OR 2  
L3 5 S 230309-98-5 OR 230309-99-6 OR 230310-00-6 OR 230310-01-7 OR 2  
L4 1 S 230310-02-8  
L5 11 S L2 OR L3 OR L4

FILE 'CAPLUS' ENTERED AT 17:55:06 ON 05 APR 2002

L6 2 S L5

FILE 'REGISTRY' ENTERED AT 17:56:30 ON 05 APR 2002

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L5 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS  
AN 1997:705896 CAPLUS  
DN 127:332478  
TI Low-fogging pressure-sensitive adhesives for harness tapes  
IN Mamish, Abboud L.; Laurin, Stephanie L. M.  
PA Kendall Co., USA  
SO U.S., 8 pp.  
CODEN: USXXAM

DT Patent  
LA English  
IC ICM C09J007-02  
NCL 428354000  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 5681654	A	19971028	US 1995-567086	19951204 <--
AB	The title adhesives are prepd. from an elastomer (e.g., natural rubber, Butex, Solt 3602), a cohesion enhancer (e.g., Vistalon 404), a tackifier (e.g., Escorez 1315), and a cure system including sulfur-contg. and zinc-based curing agents (e.g., Zetax, Me Tuads).				
ST	fogging free pressure sensitive adhesive; harness tape pressure sensitive adhesive; natural rubber pressure sensitive adhesive; zinc curing agent pressure sensitive adhesive				
IT	Isoprene-styrene rubber RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (Kraton Sol T 3602; low-fogging pressure-sensitive adhesives for harness tapes)				
IT	Ethylene-propylene rubber RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (Vistalon 404; low-fogging pressure-sensitive adhesives for harness tapes)				
IT	Petroleum resins RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (aliph., tackifiers, Escorez 1315; low-fogging pressure-sensitive adhesives for harness tapes)				
IT	Adhesive tapes Antioxidants Fireproofing agents Tackifiers Tensile strength (low-fogging pressure-sensitive adhesives for harness tapes)				
IT	Natural rubber, uses Polyolefins Styrene-butadiene rubber, uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (low-fogging pressure-sensitive adhesives for harness tapes)				
IT	137-26-8, Methyl Tuads 155-04-4, Zetax 9044-48-8, SP 1055 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (curing agents; low-fogging pressure-sensitive adhesives for harness tapes)				
IT	9010-79-1 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (ethylene-propylene rubber, Vistalon 404; low-fogging pressure-sensitive adhesives for harness tapes)				
IT	1163-19-5, Saytex 102 1344-28-1D, Alumina, hydrated RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (fireproofing agents; low-fogging pressure-sensitive adhesives for				

harness tapes)

IT 25038-32-8  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (isoprene-styrene rubber, Kraton Sol T 3602; low-fogging pressure-sensitive adhesives for harness tapes)

IT 9003-28-5, Polybutene  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (low- mol.-wt.; low-fogging pressure-sensitive adhesives for harness tapes)

IT 9002-88-4, Polyethylene  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (low-d.; low-fogging pressure-sensitive adhesives for harness tapes)

IT 6683-19-8, Irganox 1010  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (low-fogging pressure-sensitive adhesives for harness tapes)

IT 112-73-2, Butex  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (low-fogging pressure-sensitive adhesives for harness tapes)

IT 9003-55-8  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, low-fogging pressure-sensitive adhesives for harness tapes)

L5 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1997:640705 CAPLUS

DN 127:278601

TI Photoactivatable chain transfer reagents, manufacture of semitelechelic polymers having at least one terminal photoactivatable groups using these reagents, and use of these polymers to modified surfaces of plastics

IN Swanson, Melvin J.; Amos, Richard A.; Swan, Dale G.; Opperman, Gary W.

PA BSI Corp., USA

SO PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08F002-50

ICS C08F004-00; C08J003-28

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9734935	A1	19970925	WO 1997-US5344	19970320
	W: AU, CA, JP, MX				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5942555	A	19990824	US 1996-619303	19960321 <--
	CA 2249287	AA	19970925	CA 1997-2249287	19970320
	AU 9724310	A1	19971010	AU 1997-24310	19970320
	AU 737979	B2	20010906		
	EP 888389	A1	19990107	EP 1997-920012	19970320
	R: DE, ES, FR, GB, IT				
	JP 2000508003	T2	20000627	JP 1997-533803	19970320
PRAI	US 1996-619303	A	19960321		
	WO 1997-US5344	W	19970320		

AB The reagents provide one or more photoactivatable groups and one or more sulfhydryl (or other chain transfer) groups, the photoactivatable and chain transfer groups optionally being joined together by a spacer group. The reagent can be used to prep. a polymer by serving to initiate the polymn. of ethylenically unsatd. monomers. The reagent itself becomes an integral part of the resultant polymer, thereby providing the polymer with a terminal photoactivatable nature. The method provides a no. of

benefits, including the ability to provide homogeneous photoactivatable polymer compns., e.g., in terms of the uniform location of the photogroup(s) on the terminal portion of each polymer mol. and the ability to build a desired nonpolar quality, and in turn improved surface-active property, into otherwise polar polymers. Thus, polymn. of acrylamide in DMSO in the presence of AIBN and 4-mercaptomethylbenzophenone gave a polymer that was useful in improving the wettability of polypropylene disks.

ST photoactivatable chain transfer agent manuf; polyacrylamide benzophenone adduct manuf; mercaptomethylbenzophenone chain transfer agent manuf; wetting agent polypropylene disk photoactivatable polymer; telechelic polymer photoactivatable terminal group manuf

IT Immunoglobulins

RL: PRP (Properties)

(G, binding on modified plastic surfaces; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Oligonucleotides

RL: PRP (Properties)

(binding on modified plastic surfaces; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Membranes, nonbiological

(cellophane; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Polycarbonates, miscellaneous

Polysulfones, miscellaneous

RL: MSC (Miscellaneous)

(disks; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Cellophane

(membrane; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Chain transfer agents

Wetting agents

(photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Albumins, properties

RL: PRP (Properties)

(serum, binding on modified plastic surfaces; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT Polymers, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(telechelic; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 9001-99-4, Ribonuclease

RL: PRP (Properties)

(binding on modified plastic surfaces; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 99-24-1P, Methyl gallate 2150-44-9P, Methyl 3,5-dihydroxybenzoate

32752-54-8P, 4-Bromomethylbenzophenone 39148-58-8P, 4-Benzoylbenzoyl

chloride 64141-11-3P 64141-13-5P 103898-11-9P 196491-97-1P

196491-98-2P 196492-00-9P 196492-01-0P 196492-03-2P 196492-05-4P

196492-06-5P 196492-08-7P 196492-10-1P 196492-11-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)

(chain transfer agent precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 62-56-6, Thiourea, reactions 79-42-5 110-64-5, 2-Butene-1,4-diol

111-42-2, Diethanolamine, reactions 134-84-9, 4-Methylbenzophenone

156-57-0, 2-Aminoethanethiol hydrochloride 538-75-0,

1,3-Dicyclohexylcarbodiimide 611-95-0, 4-Benzoylbenzoic acid 657-27-2,

Lysine monohydrochloride 1003-10-7, .gamma.-Thiobutyrolactone

7377-26-6, Terephthalic acid chloride monomethyl ester 7719-09-7,

Thionyl chloride 24424-99-5, Di-tert-butyl dicarbonate  
 RL: RCT (Reactant)  
 (chain transfer agent precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 196491-94-8P 196491-95-9P 196491-96-0P 196491-99-3P 196492-02-1P  
 196492-04-3P 196492-07-6P 196492-09-8P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
 (chain transfer agent; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 507-63-1, Perfluorooctyl iodide  
 RL: RCT (Reactant)  
 (chain-transfer-agent precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 9003-07-0, Polypropylene  
 RL: MSC (Miscellaneous)  
 (disks; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 55750-53-3P 57079-14-8P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
 (monomer precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 60-32-2 79-37-8, Oxalyl chloride 108-31-6, 2,5-Furandione, reactions 6066-82-6, N-Hydroxysuccinimide  
 RL: RCT (Reactant)  
 (monomer precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 55750-63-5P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
 (monomer; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 9013-20-1, Streptavidin  
 RL: PRP (Properties)  
 (peroxidase-, binding on modified plastic surfaces; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 196492-12-3DP, reaction products with polymers 196492-13-4P  
 196492-14-5P 196492-16-7P 196492-17-8DP, oxidized 196492-19-0DP, reaction products with maleimidopentyl isocyanate 196492-20-3P  
 196492-22-5P 196492-23-6P 196492-24-7P 196492-25-8P 196492-26-9P  
 196492-27-0P 196492-28-1P 196492-29-2P 196492-30-5P 196492-31-6P  
 196492-32-7DP, oxidized 196492-33-8P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 98932-76-4, HT-450  
 RL: MSC (Miscellaneous)  
 (photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 9003-53-6, Polystyrene  
 RL: MSC (Miscellaneous)  
 (plates; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 26628-22-8, Sodium azide  
 RL: RCT (Reactant)  
 (polymer derivatization agent precursor; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

IT 196492-12-3P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
 (polymer derivatization agent; photoactivatable chain transfer reagents for manuf. of semitelechelic polymers for modification of surfaces of plastics)

L5 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1996:625169 CAPLUS

DN 125:248828

TI Manufacture of redispersible, acrylic core-shell copolymer powders as hydraulic binders

IN Saja, Leo Mario; Uminski, Maciej; Stefan, Pieh

PA Chemie Linz (Deutschland) GmbH I.L., Germany

SO Ger. Offen., 8 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C08F265-06

ICS C08F228-02; C08F006-02; C04B024-26

ICI C08F265-06, C08F212-02

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 58

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19506331	A1	19960829	DE 1995-19506331	19950223 <--
AB	The title copolymers comprise a core contg. 80-100% acrylate monomer units and 0-20% of an ethylenically unsatd. sulfo group-contg. compd., and a shell contg. 60-95% acrylate monomer units and, optionally, styrenic monomers, and 5-40% of an ethylenically unsatd. sulfo group-contg. compd. A typical title copolymer was prepd. by emulsion polymn. of 2-acrylamido-2-methyl-1-propanesulfonic acid, Bu acrylate, and Me methacrylate, then partially neutralized with Ca(OH) <sub>2</sub> , spray-dried to give a title powder, and tested as an additive in a cement mixt.				
ST	acrylic core shell copolymer powder binder; binder hydraulic acrylic core shell copolymer; acrylamidomethylpropanesulfonic acid core shell copolymer binder; cement additive acrylic core shell copolymer				
IT	Cement (portland, acrylic latex-modified; manuf. of redispersible, acrylic core-shell copolymer powders as hydraulic binders)				
IT	25035-69-2DP, Butyl acrylate-Methacrylic acid-Methyl methacrylate copolymer, calcium salts 101324-68-9DP, 2-Acrylamido-2-methyl-1-propanesulfonic acid-Butyl acrylate-Methyl methacrylate-Styrene copolymer, calcium salts 105732-26-1DP, 2-Acrylamido-2-methyl-1-propanesulfonic acid-Butyl acrylate-Methyl methacrylate copolymer, calcium salts 112680-18-9DP, Butyl acrylate-Methyl methacrylate-2-Sulfoethyl methacrylate copolymer, calcium salts RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (core-shell; manuf. of redispersible, acrylic core-shell copolymer powders as hydraulic binders)				

L5 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1995:995982 CAPLUS

DN 124:101890

TI Apparatus and method for preparation of printing plate by electrophotographic process

IN Kato, Eiichi

PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 147 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03G013-28

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 679957	A1	19951102	EP 1995-106212	19950425 <--
	EP 679957	B1	20000315		
	R: DE, GB				
	US 5561014	A	19961001	US 1995-426740	19950421

JP 08015925      A2      19960119      JP 1995-125592      19950427  
PRAI JP 1994-110198      19940427  
AB A method for prepn. of a printing plate by an electrophotog. process comprises forming a toner image on an electrophotog. light-sensitive element by an electrophotog. process, providing a peelable transfer layer mainly contg. a resin capable of being removed upon a chem. reaction treatment on the toner image, transferring the toner image together with the transfer layer from the light-sensitive element to a receiving material having a surface capable of providing a hydrophilic surface suitable for lithog. printing at the time of printing, and removing the transfer layer in the non-image area by the chem. reaction treatment. According to the method, good duplicated images are formed without taking the electrophotog. characteristics of transfer layer used into consideration. The transfer layer is excellent in transferability and can be achieved. A conventional electrophotog. light-sensitive element can be utilized by applying a compd. for imparting the desired releasability to the surface thereof. An app. suitable for use in the method is also disclosed.

ST printing plate prepn electrophotog process  
IT Fluoropolymers  
Siloxanes and Silicones, preparation  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(binder resins comprising)

IT Rubber, silicone, uses  
RL: DEV (Device component use); USES (Uses)  
(surface active agent on electrophotog. light-sensitive element comprising)

IT Electrophotography  
(app., method for prepn. of printing plate by electrophotog. process and app. for use therein)

IT Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(carboxy-contg., surface active agent on electrophotog. light-sensitive element comprising)

IT Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(di-Me, 3-hydroxypropyl Me, ethoxylated, surface active agent on electrophotog. light-sensitive element comprising)

IT Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(di-Me, carboxy-terminated, surface active agent on electrophotog. light-sensitive element comprising)

IT Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(di-Me, hydroxy-terminated, surface active agent on electrophotog. light-sensitive element comprising)

IT Lithographic plates  
(offset, method for prepn. of printing plate by electrophotog. process and app. for use therein)

IT 80-62-6DP, polymer with fluoroalkyl-Et methacrylate and glycidyl methacrylate    97-63-2DP, polymer with fluoroalkyl-Et methacrylate and glycidyl methacrylate    106-91-2DP, polymer with fluoroalkyl-Et methacrylate and (M)ethyl methacrylate    123109-43-3P    144541-84-4P  
150624-67-2P    150625-01-7P    150625-03-9P    150625-22-2P    150642-22-1P  
150642-24-3P    155292-83-4P    155292-86-7P    155292-87-8P    155292-88-9P  
155292-90-3P    155292-98-1P    157966-19-3P    161552-47-2P    161552-54-1P  
172835-14-2DP, polymer with fluoroalkyl-Et methacrylate    172835-66-4P  
172835-67-5P    172835-68-6P    172835-69-7P    172835-70-0P    172835-71-1P  
172835-72-2P  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(binder resins comprising)

IT 25189-12-2P    172835-50-6P    172835-51-7P    172835-52-8P    172835-53-9P  
172835-54-0P    172835-55-1P    172835-56-2P    172835-57-3P    172835-59-5P  
172835-60-8P    172835-61-9P    172835-62-0P    172835-63-1P    172835-65-3P  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP

(Preparation); USES (Uses)  
 (core-shell structure thermoplastic resin grain for transfer layer comprising)

IT 150551-83-0D, star block copolymer with acrylic polymers 150551-84-1D, star block copolymer with acrylic polymers 150551-85-2D, star block copolymer with acrylic polymers 150551-86-3D, star block copolymer with acrylic polymers 150551-90-9D, star block copolymer with acrylic polymers 150551-91-0D, star block copolymer with acrylic polymers 150551-92-1D, star block copolymer with acrylic polymers 150551-93-2D, star block copolymer with acrylic polymers 155293-25-7D, star block copolymer with acrylic polymers

RL: RCT (Reactant)  
 (initiator for star block copolymer comprising)

IT 26936-24-3 166594-78-1 169046-45-1 172835-83-5 172835-84-6 172835-86-8 172835-88-0 172835-90-4 172835-91-5 172835-92-6 172835-93-7 172835-94-8 172835-95-9 172835-96-0 172835-98-2 172836-00-9 172836-02-1

RL: DEV (Device component use); USES (Uses)  
 (peelable transfer layer comprising)

IT 150642-14-1P 155292-99-2P 155293-01-9P 155293-02-0P 155293-03-1P 155293-05-3P 155293-06-4P 155293-08-6P 155293-10-0P 155293-11-1P 156658-66-1P 157858-95-2P 161552-57-4P 161552-66-5P 172835-74-4P 172835-75-5P 172835-76-6P 172835-77-7P 172835-78-8P 172835-79-9P 172835-80-2P 172835-81-3P 172835-82-4P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (resin grain comprising)

IT 172835-73-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (star block; binder resins comprising)

IT 42557-10-8, KF 96L2.0 58258-12-1 82030-84-0, Surflon S 141 162127-42-6, X 22-167B 163916-21-0 172835-87-9D, trimethylsilyl-terminated

RL: DEV (Device component use); USES (Uses)  
 (surface active agent on electrophotog. light-sensitive element comprising)

IT 172835-15-3P 172835-17-5P 172835-18-6P 172835-19-7P 172835-20-0P 172835-21-1P 172835-22-2P 172835-23-3P 172835-24-4P 172835-25-5P 172835-27-7P 172835-29-9P 172835-31-3P 172835-32-4P 172835-33-5P 172835-34-6P 172835-35-7P 172835-36-8P 172835-37-9P 172835-38-0P 172835-39-1P 172835-40-4P 172835-42-6P 172835-43-7P 172835-44-8P 172835-45-9P 172835-46-0P 172835-47-1P 172835-49-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (thermoplastic resin grain for transfer layer comprising)

L5 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS  
 AN 1995:994730 CAPLUS  
 DN 124:101881  
 TI Preparation of printing plate by electrophotographic process  
 IN Kato, Eiichi; Momota, Makoto; Ohishi, Hiroyuki  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Eur. Pat. Appl., 129 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03G013-28  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 676673	A1	19951011	EP 1995-105297	19950407 <--
	EP 676673	B1	19991222		
	R: DE, GB				
	US 5601958	A	19970211	US 1995-413467	19950328



JP 07325435      A2      19951212      JP 1995-108291      19950407  
PRAI JP 1994-95691      19940408  
AB A method for prepn. of a printing plate by an electrophotog. process  
comprises forming a peelable transfer layer capable of being removed upon  
a chem. reaction treatment on a surface of an electrophotog.  
light-sensitive element, forming a toner image by an electrophotog.  
process on the transfer layer, heat-transferring the toner image together  
with the transfer layer onto a receiving material having a surface capable  
of providing a hydrophilic surface suitable for lithog. printing at the  
time of printing, and removing the transfer layer on the receiving  
material upon the chem. reaction treatment, wherein the transfer layer is  
formed by an electrodeposition coating method using thermoplastic resin  
grains (A1) each contg. a resin (A1) having a glass transition point of  
10-140.degree.C or a softening point of 35-180.degree.C and a resin (A2)  
having a glass transition point of .ltoreq.45.degree.C or a softening  
point of .ltoreq.60.degree.C and its glass transition point or softening  
point is .gtoreq.2.degree.C lower than that of the resin (A1). The  
transfer layer shows excellent transferability onto a receiving material  
under transfer conditions of low temp. and high speed to form transferred  
images of good qualities.  
ST lithog offset printing plate transfer layer; electrophotog lithog plate  
transfer layer  
IT Electrophotography  
(lithog. offset printing plate prepd. by)  
IT Lithographic plates  
(offset, prepn. of lithog. plate by electrophotog. process)  
IT 61255-17-2P, Divinylbenzene-dodecyl methacrylate copolymer  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(lithog. plate transfer layer from)  
IT 25766-25-0P    157859-17-1P    172598-26-4P    172598-27-5P    172598-28-6P  
172598-29-7P    172598-30-0P    172598-31-1P    172598-32-2P    172598-33-3P  
172598-34-4P    172598-35-5P    172598-36-6P    172598-37-7P    172598-38-8P  
172598-39-9P    172598-40-2P    172598-41-3P    172598-42-4P    172598-43-5P  
172598-44-6P    172598-45-7P    172598-46-8P    172598-47-9P    172598-48-0P  
172598-49-1P    172598-50-4P    172598-51-5P    172598-52-6P    172598-53-7P  
172598-54-8P    172598-55-9P    172598-56-0P    172598-57-1P    172598-58-2P  
172598-59-3P    172598-60-6P    172598-61-7P    172598-62-8P    172598-63-9P  
172598-64-0P  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
preparation); PREP (Preparation); PROC (Process)  
(transfer layer for prepn. of lithog. plate by electrophotog. process)

L5 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS  
AN 1995:746114 CAPLUS  
DN 123:156334  
TI Method for preparation of printing plate by electrophotographic process  
and apparatus for use therein.  
IN Kato, Eiichi; Nakazawa, Yusuke; Osawa, Sadao  
PA Fuji Photo Film Co., Ltd., Japan  
SO Eur. Pat. Appl., 125 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM G03G013-28  
ICS G03G005-147  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 632338	A2	19950104	EP 1994-109303	19940616 <--
	EP 632338	A3	19960313		
	EP 632338	B1	19991027		
	R: DE, GB				
	JP 07005727	A2	19950110	JP 1993-169846	19930617
	JP 07064356	A2	19950310	JP 1993-232181	19930826
	US 5620822	A	19970415	US 1994-262029	19940617

PRAI JP 1993-169846 19930617  
JP 1993-232181 19930826

AB A method for prepn. of a printing plate by an electrophotog. process comprising forming a peelable transfer layer mainly contg. a resin capable of being removed upon a chem. reaction treatment on the surface of an electrophotog. light-sensitive element, forming a toner image on the transfer layer by an electrophotog. process, heat-transferring the toner image together with the transfer layer onto a receiving material a surface of which is capable of providing a hydrophilic surface suitable for lithog. printing at the time of printing, and removing the transfer layer on the receiving material upon the chem. reaction treatment, wherein prior to or simultaneously with the formation of transfer layer a compd. which contains a F atom and/or Si atom is applied to the surface of electrophotog. light-sensitive element to improve releasability of the surface of electrophotog. light-sensitive element. The method continuously provides printing plates excellent in image qualities in a stable manner and is suitable for a scanning exposure system using a laser beam. An app. suitable for performing the present method is also described.

ST printing plate electrophotog release layer; surfactant silicon fluoro compd

IT Electrophotographic photoconductors and photoreceptors  
Printing plates  
(prepn. of printing plate by electrophotog. process)

IT Fluoropolymers  
Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(prepn. of printing plate by electrophotog. process)

IT Siloxanes and Silicones, uses  
RL: DEV (Device component use); USES (Uses)  
(di-Me, carboxy-terminated, prepn. of printing plate by electrophotog. process)

IT 9016-00-6D, Poly[oxy(dimethylsilylene)], di-Me  
RL: DEV (Device component use); USES (Uses)  
(3-hydroxypropyl Me, ethylene oxide-graft; prepn. of printing plate by electrophotog. process)

IT 25766-25-0 26936-24-3 27155-22-2 58258-12-1 65697-21-4  
65697-22-5 82030-84-0, Surflon S 141 91105-71-4, Surflon S 382  
99031-41-1 144070-79-1 163655-70-7 163916-22-1 163916-23-2  
163916-24-3 163916-25-4 163916-26-5D, Fluoride and methylterminated  
163916-27-6 166594-70-3 166594-72-5 166594-74-7 166594-75-8  
166594-76-9 166594-77-0 166594-78-1 166594-80-5 166594-81-6  
166594-82-7 166594-83-8 166594-84-9 166594-85-0 166594-86-1  
166594-88-3 166594-90-7 166594-92-9  
RL: DEV (Device component use); USES (Uses)  
(prepn. of printing plate by electrophotog. process)

IT 158312-76-6P 166594-20-3P 166594-21-4P 166594-23-6P 166594-24-7P  
166594-25-8P 166594-27-0P 166594-29-2P 166594-31-6P 166594-32-7P  
166594-34-9P 166594-36-1P 166594-37-2P 166594-38-3P 166594-39-4P  
166594-41-8P 166594-43-0P 166594-44-1P 166594-45-2P 166594-47-4P  
166594-48-5P 166594-49-6P 166594-50-9P 166594-51-0P 166594-52-1P  
166594-54-3P 166594-55-4P 166594-56-5P 166594-58-7P 166594-60-1P  
166594-61-2P 166594-62-3P 166594-63-4P 166594-66-7P 166594-67-8P  
166594-68-9P 166594-69-0P 166594-23-1P  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
(Preparation); USES (Uses)  
(release layer; prepn. of printing plate by electrophotog. process)

L5 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1995:416209 CAPLUS

DN 122:226708

TI Method of forming an electrophotographic color transfer image and electrophotographic light-sensitive material for use therein.

IN Kato, Eiichi; Nakazawa, Yusuke; Osawa, Sadao

PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 116 pp.

CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM G03G005-14  
 ICS G03G005-02  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 617333	A2	19940928	EP 1994-104744	19940324 <--
	EP 617333	A3	19960306		
	EP 617333	B1	20000712		
	R: DE, GB				
	JP 06282118	A2	19941007	JP 1993-89528	19930325
	JP 06289733	A2	19941018	JP 1993-93834	19930330
	US 5582943	A	19961210	US 1994-217060	19940324
PRAI	JP 1993-89528	A	19930325		
	JP 1993-93834	A	19930330		

AB The title method comprises forming .gtoreq.1 color toner image on a transfer layer provided on the surface of an electrophotog. light-sensitive element by an electrophotog. process and heat-transferring the toner image together with the transfer layer onto a receiving material where the surface of the electrophotog. light-sensitive element has an adhesive strength of .ltoreq.200 g force, which is measured according to JIS Z = 0237-1980, and the transfer layer mainly contains a thermoplastic resin (AH) having a glass transition point of .ltoreq.140.degree. or a softening point of .ltoreq.180.degree. and a thermoplastic resin (AL) having a glass transition point of .ltoreq.45.degree. or a softening point of .ltoreq.60.degree. in which a difference in the glass transition point or softening point between the resin (AH) and the resin (AL) is at least 2.degree.. The method is excellent in obtaining color duplicates having good image quality without color shear and good storage stability at a low cost. An electrophotog. light-sensitive material suitable for use in the method is also described.

ST electrophotog color transfer thermoplastic resin

IT Electrophotographic paper  
 (thermal-transfer; thermoplastic resin on surface layer)

IT Vinyl acetal polymers  
 RL: DEV (Device component use); USES (Uses)  
 (butyrals, electrophotog. thermal-transfer sheet with surface layer contg. thermoplastic resin)

IT 157966-19-3P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (3electrophotog. thermal-transfer sheet with surface layer contg. thermoplastic resin)

IT 9002-85-1 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 26655-84-5, p-Methylstyrene-styrene copolymer 26715-83-3, Vinyl acetate-vinyl propionate copolymer 27707-97-7 28429-02-9, Methyl methacrylate-p-methylstyrene copolymer 28503-39-1, Butyl methacrylate-vinyl acetate copolymer 36582-66-8 94290-23-0 100547-09-9 109850-80-8, Acrylonitrile-p-methylstyrene-styrene copolymer 129588-53-0 157859-01-3 161552-71-2 161552-72-3 161552-74-5 161552-75-6 161552-76-7 161552-77-8 161552-78-9 161552-79-0 161552-80-3 161552-81-4 161941-34-0  
 RL: DEV (Device component use); USES (Uses)  
 (electrophotog. thermal-transfer sheet with surface layer contg. thermoplastic resin)

IT 9003-55-8P, 1,3-Butadiene-styrene copolymer 9004-36-8P 9010-86-0P, Ethyl acrylate-ethylene copolymer 24937-78-8P, Ethylene-vinylacetate copolymer 25053-53-6P 144541-84-4P 150624-67-2P 150624-77-4P 150624-89-8P 150625-01-7P 150625-03-9P 150625-19-7P 150625-22-2P 150642-22-1P 150642-24-3P 155292-83-4P 155292-84-5P 155292-85-6P 155292-86-7P 155292-87-8P 155292-88-9P 155292-92-5P 155292-94-7P 155292-98-1P 156658-66-1P 157858-92-9P 157858-95-2P 157858-96-3P 157858-97-4P 157858-98-5P 157858-99-6P 161552-19-8P 161552-20-1P

161552-22-3P 161552-23-4P 161552-24-5P 161552-25-6P 161552-27-8P  
 161552-29-0P 161552-30-3P 161552-31-4P 161552-32-5P 161552-33-6P  
 161552-34-7P 161552-35-8P 161552-36-9P 161552-37-0P 161552-38-1P  
 161552-39-2P 161552-40-5P 161552-41-6P 161552-42-7P 161552-43-8P  
 161552-46-1P 161552-47-2P 161552-48-3P 161552-51-8P 161552-54-1P  
 161552-56-3P 161552-57-4P 161552-58-5P 161552-59-6P 161552-60-9P  
 161552-61-0P 161552-62-1P 161552-63-2P 161552-64-3P 161552-65-4P  
 161552-66-5P 161552-67-6P 161552-69-8P 161574-91-0P 161574-92-1P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
 (Preparation); USES (Uses)

(electrophotog. thermal-transfer sheet with surface layer contg.  
 thermoplastic resin)

IT 150551-83-0P 150551-85-2P 150551-86-3P 150551-90-9P 150551-91-0P  
 150551-92-1P 158320-07-1P 161552-55-2P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
 (Preparation); USES (Uses)

(star-block polymer initiator; electrophotog. thermal-transfer sheet  
 with surface layer contg. thermoplastic resin)

L5 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1994:334844 CAPLUS

DN 120:334844

TI Electrophotographic liquid developer

IN Furukawa, Akira; Nakajima, Nobuko

PA Mitsubishi Paper Mills Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G009-13

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05188658	A2	19930730	JP 1992-178552	19920706
	US 5393633	A	19950228	US 1992-928343	19920812 <--
PRAI	JP 1991-229564		19910815		
	JP 1991-229569		19910815		
	JP 1991-229570		19910815		
	JP 1992-178552		19920706		

AB In the title electrophotog. liq. developer comprising resin particles  
 dispersed in a highly insulating hydrocarbon medium, the above resin  
 particles are obtained by polymg. a monomer sol. in the above medium in  
 the presence of a polymer sol. in the above medium and possessing  
 chain-transferable groups at its chain end or side chain. High concn.  
 resin dispersions can be obtained, and, since redispersion of the  
 particles takes place readily, resin deposition does not result from  
 evapn. even on long-term use leading to the formation of stable images  
 even over a long service period.

ST electrophotog liq developer resin particles

IT Electrophotographic developers

(liq., resin particles for, in stable dispersions)

IT 139406-18-1, Stearyl methacrylate-vinyl acetate block copolymer  
 150407-66-2, n-Dodecyl methacrylate-vinyl acetate block copolymer  
 155287-85-7, 2-Ethylhexyl acrylate-methacrylic acid-vinyl acetate block  
 copolymer 155287-86-8 155287-87-9, n-Dodecyl methacrylate-vinyl  
 acetate-N-vinylpyrrolidone-vinylbenzoic acid block copolymer 155287-88-0  
 155417-33-7, 2-Ethylhexyl methacrylate-vinyl acetate block copolymer  
 155417-34-8, Methyl methacrylate-stearyl methacrylate-vinyl acetate block  
 copolymer

RL: USES (Uses)

(electrophotog. liq. developer contg.)

IT 25639-21-8DP, Stearyl methacrylate homopolymer, dithiocarbamate-terminated  
 25719-51-1DP, 2-Ethylhexyl methacrylate homopolymer, dithiocarbamate-  
 terminated 25719-52-2DP, n-Dodecyl methacrylate homopolymer,  
 dithiocarbamate- or mercapto-terminated 29014-81-1DP, 2-Ethylhexyl

methacrylate-methacrylic acid copolymer, dithiocarbamate-terminated  
 30473-93-9DP, Methyl methacrylate-stearyl methacrylate copolymer,  
 mercapto-terminated 55778-37-5DP, n-Dodecyl methacrylate-vinyl acetate  
 copolymer, dithiocarbamate-terminated 155287-84-6P  
 RL: PREP (Preparation); USES (Uses)  
 (prepn. of, as dispersion stabilizing resin)

L5 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS  
 AN 1994:55356 CAPLUS  
 DN 120:55356  
 TI Preparation of graft copolymers  
 IN Himori, Shunichi  
 PA Mitsubishi Petrochemical Co., Ltd., Japan  
 SO Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08F259-00  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 516077	A1	19921202	EP 1992-108937	19920527
	EP 516077	B1	19960117		
	R: DE, FR, GB, IT				
	JP 04348115	A2	19921203	JP 1991-121409	19910527
	US 5314958	A	19940524	US 1992-888603	19920527 <--
PRAI	JP 1991-121409		19910527		
OS	MARPAT 120:55356				
AB	An ethylenic monomer is graft polyemd. with a halogen-contg. polymer dispersed in a polar solvent in the presence of a reducing agent and a phase-transfer catalyst (onium compds. and/or ionophore compds.). Thus, 50 g chlorinated (2.6%) polypropylene [no.-av. mol. wt. (Mn) 3.2 .times. 104] and 30 g Me methacrylate were graft polyemd. in the presence of Bu4NBr and Na2S2O4 to give 78.8% yield (96% conversion) graft copolymer (Mn 5 .times. 104; graft fraction 72.1%).				
ST	graft polymn methacrylate chlorinated polypropylene; sodium dithionite reducer graft polymn; onium compd catalyst graft polymn				
IT	Reducing agents (dithionous or phosphinic acids, in graft polymn. of ethylenic monomer on halogen-contg. polymer)				
IT	Ionophores (phase-transfer catalysts, for graft polymg. halogen-contg. polymers with ethylenic monomers)				
IT	Onium compounds Pyridinium compounds RL: CAT (Catalyst use); USES (Uses) (phase-transfer catalysts, for graft polymg. halogen-contg. polymers with ethylenic monomers)				
IT	Polymerization (graft, of ethylenic monomers on halogen-contg. polymers)				
IT	Polymerization catalysts (graft, phase-transfer, onium compds. or ionophores, for halogen-contg. polymers with ethylenic monomers)				
IT	Alkenes, polymers RL: PREP (Preparation) (.alpha.-, halo, graft polymers, with ethylenically unsatd. monomers, prepn. of, catalysts for)				
IT	56-37-1, Benzyltriethylammonium chloride 1643-19-2, Tetrabutylammonium bromide 5137-55-3, Methyltrioctylammonium chloride 32503-27-8, Tetrabutylammonium hydrogen sulfate 79916-29-3 RL: CAT (Catalyst use); USES (Uses) (phase-transfer catalyst, in graft polymn. of ethylenic monomer on halogen-contg. polymer)				
IT	100-42-5DP, graft polymers with halogenated polypropylene 141-32-2DP, graft polymers with halogenated polypropylene RL: PREP (Preparation)				

(prepn. of, reducing agent and phase-transfer catalyst for)  
 IT 80-62-6DP, graft polymers with halogenated polyolefins 9002-88-4DP,  
 Polyethylene, chlorinated, Me methacrylate-grafted 9003-07-ODP,  
 Polypropylene, chlorinated, Me methacrylate-grafted 108573-35-9P, Methyl  
 methacrylate-vinyl chloride graft copolymer 152275-88-2P 152275-89-3P  
 RL: PREP (Preparation)  
 (prepn. of, reducing agent and phase-transfer catalyst in)  
 IT 7681-53-0, Sodium phosphinate 7775-14-6, Sodium dithionite  
 RL: USES (Uses)  
 (reducing agent, in graft polymn. of ethylenic monomer on  
 halogen-contg. polymer)

L5 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS  
 AN 1993:434363 CAPLUS  
 DN 119:34363  
 TI Medical materials having blood compatibility  
 IN Senshu, Kazuhisa; Nakahama, Seiichi  
 PA Terumo K. K., Japan  
 SO Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08F297-02  
 ICS C09D153-00; A61L033-00  
 CC 63-7 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 538127	A1	19930421	EP 1992-402812	19921014 <--
	R: BE, DE, FR, GB, IT, NL, SE				
	JP 05345016	A2	19931227	JP 1992-351894	19921013
PRAI	JP 1991-264171		19911014		
AB	A block copolymer comprising methacrylates, styrene derivs., and/or isoprene is prepd. by anionic living polymn. The block copolymer shows a low platelet adhesion and high flexibility due to the formation of a lamellar or the like microphase sepn. structure on its surface, therefore, it is best suited for use in medical devices which have blood-contacting portions. Thus, 2-hydroxyethyl methacrylate-octylstyrene-2-hydroxyethyl methacrylate block copolymer (I) was prepd. A polyurethane sheet was dipped into a soln. of I in DMF and dried for coating. The coated sheet was contacted with a platelet-rich plasma and it showed few adhered platelets on the sheet.				
ST	methacrylate styrene block copolymer medical goods; isoprene methacrylate block copolymer medical goods				
IT	Polymerization (anionic, block, living, of methacrylates with styrenes or isoprene)				
IT	Blood vessel (artificial, polyester tubes inner layer made with methacrylate-styrene block copolymers for, blood compatibility improvement in)				
IT	Medical goods (catheters, polyolefins coated with methacrylate-styrene block copolymers for, blood compatibility improvement in)				
IT	148362-24-7P		148387-99-9P		
	RL: PREP (Preparation) (prepn. of, for manuf. of biocompatible medical goods)				

L5 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS  
 AN 1992:661610 CAPLUS  
 DN 117:261610  
 TI Electrostatographic toner containing block copolymer binder  
 IN Kotaki, Takaaki; Hyosu, Yoshihiko; Fujita, Ryoichi; Kanbayashi, Makoto; Shimojo, Minoru  
 PA Canon K. K., Japan  
 SO Eur. Pat. Appl., 83 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English

IC ICM G03G009-087  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 488729	A1	19920603	EP 1991-311015	19911128 <--
	EP 488729	B1	19970611		
	R: DE, FR, GB, IT				
	US 5418102	A	19950523	US 1991-799193	19911127
	JP 05019532	A2	19930129	JP 1991-339459	19911129
	JP 3230007	B2	20011119		
PRAI	JP 1990-325525	A	19901129		
	JP 1990-325526	A	19901129		
	JP 1990-325527	A	19901129		
	JP 1990-325528	A	19901129		
	JP 1990-325529	A	19901129		
	JP 1990-325530	A	19901129		
	JP 1990-329628	A	19901130		
	JP 1990-329630	A	19901130		
	JP 1991-26699	A	19910129		

OS MARPAT 117:261610

AB An electrostatog. toner, which has a low fixing temp. and a wide fixing temp. range, comprises a colorant and a binder resin comprising an AB-type block copolymer, wherein the segment A has a copolymer structure comprised of a styrene monomer and .gtoreq.1 monomer selected from the group consisting of acrylic monomers, methacrylic monomers, and diene monomers and the segment B has a copolymer structure comprised of a styrene monomer and .gtoreq.1 monomer selected from the group consisting of acrylic monomers, methacrylic monomers, and diene monomers, provided that the segment A and segment B having copolymer structures different from each other.

ST electrostatog toner styrene acrylate block copolymer

IT Electrophotography

(developers, toners, contg. acrylate-styrene block copolymers with low fixing temp.)

IT Electrophotographic developers

(toners, contg. acrylate-styrene block copolymers with low fixing temp.)

IT 110772-34-4, Butyl acrylate-styrene block copolymer 144700-34-5  
144786-93-6

RL: TEM (Technical or engineered material use); USES (Uses)  
(electrostatog. toners contg., with low fixing temp.)

L5 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1992:245250 CAPLUS

DN 116:245250

TI electrostatographic toner

IN Okado, Kenji; Nakazawa, Akihiko; Fujita, Ryoichi; Kanbayashi, Makoto

PA Canon K. K., Japan

SO Eur. Pat. Appl., 49 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03G009-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 466149	A1	19920115	EP 1991-111554	19910711
	EP 466149	B1	19961016		
	R: DE, FR, GB, IT				
	JP 05061244	A2	19930312	JP 1991-171290	19910711
	JP 3150166	B2	20010326		
	US 5620824	A	19970415	US 1994-272507	19940707 <--
PRAI	JP 1990-182670	A	19900712		

JP 1990-194978 A 19900725  
 JP 1990-199253 A 19900730  
 JP 1990-199254 A 19900730  
 JP 1990-202449 A 19900801  
 JP 1990-208122 A 19900808  
 JP 1990-222567 A 19900827  
 JP 1990-226693 A 19900830  
 JP 1991-145992 A 19910618  
 US 1991-728264 B1 19910711

AB A toner for developing an electrostatic image has resin particles contg. a coloring agent, a magnetic powder, and a powdery additive. The powdery additive has org. resin particles having peaks in regions of particles diams. 20-200 m.mu. and 300-800 m.mu. in their particle size distribution and the large particles included in the region of particle diams. of 300-800 m.mu. is 2-20 wt.%. The toner has improved environmental stability.

ST electrostatog toner particle size resin

IT Polyesters, uses

RL: USES (Uses)

(electrostatog. developers contg.)

IT Electrography

(developers, toners, contg. resin particles)

IT Electrophotographic developers

(toners, contg. resin particles)

IT 9011-14-7, Methyl methacrylate polymer 25034-86-0, Methyl methacrylate-styrene copolymer 25750-06-5, 2-Ethylhexyl acrylate-methyl methacrylate-styrene copolymer 25767-47-9, Butyl acrylate-styrene copolymer 27136-15-8, Butyl acrylate-methyl methacrylate styrene copolymer 131830-42-7

RL: USES (Uses)

(electrostatog. developers contg.)

L5 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1991:473005 CAPLUS

DN 115:73005

TI Imidazole compound-containing hardening agent compositions, method of preparing the same and thermosetting epoxy resin compositions

IN Yasuda, Akira; Nagase, Rihei

PA Somar Corp., Japan

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G059-50

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 421389	A2	19910410	EP 1990-118982	19901004 <--
	EP 421389	A3	19910904		
	R: DE, FR, GB, NL				
	JP 03122113	A2	19910524	JP 1989-261819	19891006
	JP 05087086	B4	19931215		
	US 5244939	A	19930914	US 1990-592743	19901004
	CA 2026994	AA	19910407	CA 1990-2026994	19901005
PRAI	JP 1989-261819		19891006		

AB The title storage-stable compns. with good reactivity, giving hardened products with good adhesion, comprise hardening agents of low reactivity, C.gtoreq.2 alkyl- or alkenyl-substituted imidazole compds., and zeolites. A mixt. of 80 parts bisphenol A epoxy resin (Epikote 1004) and 20 parts cresol novolak epoxy resin (EOCN 104) was cured with 31 parts of a compn. contg. phenol novolak resin 180, zeolite 100, and 1-aminoethyl-2-methyl imidazole (I) 30 parts, giving 150.degree. gel time 60.0 s and adhesive strength (to steel) 233.3 kg/cm2, vs. 54.0 and 153.5, resp., using a hardening compn. contg. 10 parts 2-methylimidazole instead of 30 parts I.

ST crosslinker compn imidazole zeolite; phenol novolak crosslinker epoxy resin; adhesion crosslinked epoxy compn



IT Crosslinking agents  
(contg. imidazole compds. and zeolites, for epoxy resins)

IT Zeolites, uses and miscellaneous  
RL: USES (Uses)  
(crosslinking agent compns. contg., for epoxy resins)

IT Epoxy resins, uses and miscellaneous  
RL: USES (Uses)  
(hardening agent compns. for)

IT Anhydrides  
RL: USES (Uses)  
(hardening agents, contg. imidazole compds. and zeolites, for epoxy resins)

IT Crosslinking catalysts  
(imidazole compds., crosslinking agent compns. contg., for epoxy resins)

IT Phenolic resins, uses and miscellaneous  
RL: USES (Uses)  
(novolak, hardening agents, contg. imidazole compds. and zeolites, for epoxy resins)

IT Carboxylic acids, uses and miscellaneous  
RL: USES (Uses)  
(poly-, hardening agents, contg. imidazole compds. and zeolites, for epoxy resins)

IT 1072-63-5, 1-Vinylimidazole 1615-14-1, 1-(2-Hydroxyethyl)imidazole  
1615-15-2, 1-(2-Hydroxyethyl)-2-methylimidazole 2851-95-8,  
2-Methyl-1-vinylimidazole 5739-10-6, 1-Aminoethyl-2-imidazole  
31410-01-2, 1-Allylimidazole 114858-70-7 116319-96-1  
RL: USES (Uses)  
(crosslinking agent compns. contg., for epoxy resins)

IT 25068-38-6, Epikote 1004 70903-88-7, EOCN 104  
RL: USES (Uses)  
(hardening agent compns. for)

L5 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2002 ACS

AN 1991:7427 CAPLUS

DN 114:7427

TI Dithiocarbamate group-containing polysiloxanes as photoinitiators

IN Himori, Shunichi

PA Mitsubishi Petrochemical Co., Ltd., Japan

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G077-392

ICS C08F002-50

CC 35-3 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 386615	A2	19900912	EP 1990-103946	19900301 <--
	EP 386615	A3	19910828		
	EP 386615	B1	19970730		
	R: BE, DE, FR, GB, IT, NL				
	JP 02228326	A2	19900911	JP 1989-49068	19890301
	US 5071936	A	19911210	US 1990-486849	19900301
PRAI	JP 1989-49068		19890301		

AB A dithiocarbamate-contg. polysiloxane useful for a photopolymer. initiator comprises  $X_1SR_1R_2(SiX_2R_3O)_n(SiR_4R_5O)_mSiR_6R_7X_3$  where  $X_1, X_2, X_3$  each = (a) dithiocarbamate group  $R_8R_9NC(S)SR_{10}$  ( $R_8$  and  $R_9$  each H or C1-10 alkyl;  $R_{10}$  =  $CH_2-p-C_6H_4C_2H_5$ ;  $a$  = 1-10 integer or C1-10 alkylene, (b) dithiocarbamate group  $R_{11}R_{12}NC(S)S-$  ( $R_{11}$  and  $R_{12}$  each = H, C1-10 alkyl), (c) C1-10 hydrocarbyl(oxy), (d) C1-10 fluoroalkyl (1-17 F atoms), (e) OH where  $\sum$  of  $X_1-X_3$  is (a) or (b); and where  $R_1-R_7$  each = C1-10 hydrocarbyl(oxy), C1-10 fluoroalkyl (1-17 F atoms), or OH;  $n$  = 1-10 integer; and  $m$  = 20-800 integer. Thus, polydimethylsiloxane having H bonded to Si at one end (no.-av. mol. wt. 5000, prep'd by anionic polymn.) 500, p-chloromethylstyrene 305, Pt catalyst 5, and PhMe 1000 g were heated

under N to 50.degree. for 5 h, and unreacted material, solvent and catalyst removed to give 490 g polydimethylsiloxane chlorinated to one end. The latter 400, Et<sub>2</sub>NCS<sub>2</sub>Na 26.5, and PhMe 400 g were heated to 60.degree. for 5 h under N and worked up to give 388 g title polysiloxane with .apprx.0.98 mol dithiocarbamate groups. This polysiloxane 50, Me methacrylate 50, and PhMe 200 g was UV-irradiated under N at 60.degree. at 15 cm to give, in work-up, a 93 g block polymer showing wt.-av. mol. wt. 2.02 .times. 10<sup>4</sup>, glass temp. -120.degree. and 105.degree., and micro-domain morphol.

- ST dithiocarbamate contg siloxane; photoinitiator dithiocarbamate contg siloxane; methacrylate photoinitiator dithiocarbamate contg siloxane
- IT Coating materials  
(acrylic-siloxane block copolymers, crosslinked, dithiocarbamate photoinitiated)
- IT Polymer morphology  
(of siloxane-Me methacrylate block copolymers, dithiocarbamate initiators in)
- IT Siloxanes and Silicones, reactions  
RL: RCT (Reactant)  
(di-Me, chlorine-terminated, reaction of, with sodium diethyldithiocarbamate)
- IT Siloxanes and Silicones, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(dithiocarbamate group-contg., prepn. and photocopolymer. of, as initiators)
- IT Polymerization catalysts  
(photochem., monomers and, dithiocarbamate-contg. dimethylsiloxanes, for acrylic and vinyl monomers)
- IT Crosslinking  
(photochem., of acrylic monomers with dithiocarbamate-contg. siloxanes)
- IT 3524-68-3DP, Pentaerythritol triacrylate, polymers with dithiocarbamate-contg. dimethylsiloxane  
RL: PREP (Preparation)  
(crosslinked, coatings, photoinitiators in prepn. of)
- IT 13048-33-4DP, polymers with dithiocarbamate-contg. dimethylsiloxane  
RL: PREP (Preparation)  
(crosslinked, dithiocarbamate photoinitiators in prepn. of, for coatings)
- IT 80-62-6DP, polymers with dithiocarbamate-contg. dimethylsiloxanes, block  
RL: PREP (Preparation)  
(prepn. of, with microdomain morphol.)
- IT 100-42-5DP, polymers with dithiocarbamate-contg. dimethylsiloxane, block  
141-32-2DP, polymers with dithiocarbamate-contg. dimethylsiloxane, block  
RL: PREP (Preparation)  
(prepn. of, with microdomain structure)
- IT 148-18-5, Sodium diethyldithiocarbamate  
RL: RCT (Reactant)  
(reaction of, with chlorine-contg. dimethylsiloxane)
- IT 1592-20-7  
RL: RCT (Reactant)  
(reaction of, with hydrogen-contg. dimethylsiloxane)
- IT 818-92-8, Allyl fluoride  
RL: RCT (Reactant)  
(reaction of, with hydrogen-terminated dimethylsiloxane)

L19 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1999:451309 CAPLUS

DN 131:88318

TI **Block** polymer synthesis by controlled radical polymerization  
from **dithiocarbamate** compounds

IN Corpart, Pascale; Charmot, Dominique; Zard, Samir; Franck, Xavier;  
Bouhadir, Ghenwa

PA Rhodia Chimie, Fr.

SO PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DT Patent

LA French

IC ICM C08F293-00

ICS C08F002-38

CC 35-4 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9935177	A1	19990715	WO 1998-FR2867	19981223
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	FR 2773161	A1	19990702	FR 1997-16779	19971231
	FR 2773161	B1	20000121		
	CA 2315914	AA	19990715	CA 1998-2315914	19981223
	AU 9918831	A1	19990726	AU 1999-18831	19981223
	JP 2002500251	T2	20020108	JP 2000-527572	19981223
	WO 9935178	A1	19990715	WO 1998-FR2891	19981228
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9919714	A1	19990726	AU 1999-19714	19981228
	EP 1044231	A1	20001018	EP 1998-964531	19981228
	R:	DE, FR, GB			
	ZA 9811909	A	19990629	ZA 1998-11909	19981229
	ZA 9811908	A	19990630	ZA 1998-11908	19981229
PRAI	FR 1997-16779	A	19971231		
	FR 1998-9780	A	19980730		
	WO 1998-FR2867	W	19981223		
	WO 1998-FR2891	W	19981228		
AB	<b>Block</b> copolymers with narrow mol.-wt. distribution are prepd. by controlled radical polymn. of ethylenically mono- or diunsatd. monomers consecutively in the presence initially of a <b>dithiocarbamate</b> R2R3NCS2R1 [I; R1 = org. group; R2, R3 = org. group with electron-withdrawing effect, or NR2R3 = heterocyclic ring]. Thus, Me2C(NH2)CH2OH was treated with NaOEt and condensed with OC(OEt)2 to give 75% 4,4-dimethyloxazolidin-2-one, which was treated consecutively with NaH in THF-DMSO, CS2, and ClCH(CO2Et)2 to give 23% I [R1 = CH(CO2Et)2, NR2R3 = 4,4-dimethyl-2-oxo-3-oxazolidinyl] (II). Polymn. of 1.06 g of a soln. comprising 4.01 g Et acrylate, 0.176 g II, and 8.8 mg <b>AIBN</b> at 70.degree. for 24 h, removal of unreacted monomer by evapn., addn. of 2.08 g styrene and 4.4 mg <b>AIBN</b> , and polymn. at 70.degree. for 40 h gave a <b>block</b> copolymer with Mn 20,100 and Mw/Mn 1.2.				
ST	radical <b>block</b> copolymn <b>dithiocarbamate</b> initiator				

IT Polymerization  
(**block**, radical; **block** polymer synthesis by  
controlled radical polymn. from **dithiocarbamates**)

IT Polymerization  
(**living**, radical; **block** polymer synthesis by  
controlled radical polymn. from **dithiocarbamates**)

IT Polymerization kinetics  
(radical; polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

IT 111740-42-2P, Methyl acrylate-styrene **block** copolymer  
114397-35-2P, Ethyl acrylate-styrene **block** copolymer  
127972-36-5P, tert-Butyl acrylate-styrene **block** copolymer  
135911-78-3P, Butyl acrylate-vinyl acetate **block** copolymer  
218966-84-8P, Ethyl acrylate-vinyl acetate **block** copolymer  
218966-86-0P, tert-Butyl acrylate-vinyl acetate **block** copolymer  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**block** polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

IT 57-13-6, Urea, reactions 75-15-0, Carbon disulfide, reactions 75-44-5,  
Phosgene 78-67-1, **AIBN** 79-22-1, Methyl chloroformate  
100-61-8, N-Methylaniline, reactions 105-58-8, Diethyl carbonate  
108-27-0, 5-Methyl-2-pyrrolidinone 108-91-8, Cyclohexylamine, reactions  
122-39-4, Diphenylamine, reactions 124-68-5, 2-Amino-2-methyl-1-propanol  
299-42-3, Ephedrin 496-15-1, Indoline 497-25-6, 2-Oxazolidinone  
535-11-5, Ethyl 2-bromopropionate 5680-80-8, Serine methyl ester  
hydrochloride 7568-92-5, Phenylglycinol 14064-10-9, Diethyl  
chloromalonate 74965-31-4  
RL: RCT (Reactant)  
(**block** polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

IT 5817-68-5P, Methyl cyclohexylcarbamate 26654-39-7P, 4,4-  
Dimethyloxazolidin-2-one 96751-61-0P 103774-40-9P 230309-92-9P  
230309-93-0P 230309-94-1P 230309-95-2P 230309-96-3P 230309-97-4P  
230309-98-5P 230309-99-6P 230310-00-6P 230310-01-7P 230310-02-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(**block** polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

IT 230310-03-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(**block** polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

IT 9003-20-7P, Poly(vinyl acetate) 9003-21-8P, Poly(methyl acrylate)  
9003-32-1P, Poly(ethyl acrylate) 9003-53-6P, Polystyrene 9011-14-7P,  
Poly(methyl methacrylate)  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymer synthesis by controlled radical polymn. from  
**dithiocarbamates**)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Fryling; US 2396997 A 1946 CAPLUS
- (2) Mitsubishi Petrochemical Co; EP 0296850 A 1988 CAPLUS
- (3) Okawara, M; Bulletin of the Tokyo Institute of Technology 1966, 78, P1
- (4) Phuong, L; WO 9801478 A 1998 CAPLUS
- (5) Pont, D; WO 9615157 A 1996 CAPLUS
- (6) Sanyo Chem Ind Ltd; JP 04198303 A 1992 CAPLUS
- (7) Tosoh Corp; EP 0421149 A 1991 CAPLUS

L19 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS  
AN 1992:623002 CAPLUS  
DN 117:223002  
TI Electrophotographic light-sensitive material  
IN Kato, Eiichi  
PA Fuji Photo Film Co., Ltd., Japan  
SO Eur. Pat. Appl., 85 pp.  
CODEN: EPXXDW  
DT Patent  
LA English

IC ICM G03G005-05  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 440226	A2	19910807	EP 1991-101286	19910131
	EP 440226	A3	19920102		
	EP 440226	B1	19950726		
	R: DE, GB				
	JP 03225344	A2	19911004	JP 1990-18948	19900131
	US 5135830	A	19920804	US 1991-647073	19910129
PRAI	JP 1990-18948		19900131		

AB An electrophotog. photoconductor is described with a photoconductor layer contg. a binder resin comprising 2 components (A and B). The component A has a wt. av. mol. wt. (Mw) of 1 .times. 10<sup>3</sup> - 2 .times. 10<sup>4</sup>, contains .gtoreq.30 wt.% of polymerizable component -CHR1CR2(CO2R3)-[R1, R2 = H, CN, hydrocarbon; R3 = hydrocarbon], and has .gtoreq.1 acidic group from PO3H2, SO3H, CO2H, OH, P(O)(OH)R (R = hydrocarbon, OR4, R4 = hydrocarbon), and cyclic acid anhydride-contg. group bonded to one of the **terminals** of the main chain. The component B is .gtoreq.1 graft copolymer having a Mw of 3 .times. 10<sup>4</sup> - 1 .times. 10<sup>6</sup>, and contains .gtoreq.1 monofunctional macromers having Mw = 1 .times. 10<sup>3</sup> - 2 .times. 10<sup>4</sup>. The macromer is comprised of a CD **block** copolymer where the C **block** comprises .gtoreq.1 monomers contg. .gtoreq.1 acidic group from PO3H2, CO2H, SO3H, phenolic OH, P(O)(OH)R (R = hydrocarbyl, hydrocarboxy), cyclic acid anhydride-contg. group; and the D **block** contains .gtoreq.1 monomer, forming the operating unit -CHR5CR6(Z1R7)-[R5, R6 = H, halogen, CN, hydrocarbon, ester group; Z1 = CO2, O2C, O, SO2, etc.; R7 = hydrocarbon, H]. The electrophotog. material exhibits excellent electrostatic characteristics and mech. strength even under severe conditions.

ST electrophotog photoconductor binder; **block** copolymer binder

IT Electrophotographic photoconductors and photoreceptors  
(binders, for excellent mech. strength)

IT 120293-17-6

RL: USES (Uses)

(bromomethylstyrene-**terminated**, prepn, of macromonomer)

IT 138115-34-1DP, carboxy-**terminated**, reaction product with hydroxyethyl methacrylate, hydrolyzed 138136-28-4DP, reaction product with ethylene oxide and methacrylic chloride, hydrolyzed 138232-67-4DP, **terminated** with bromomethylstyrene, hydrolyzed 138232-68-5DP, N-ethyl-N-hydroxyethylthiocarbamate-**terminated**, reaction product with isocyanatoethyl methacrylate

RL: PREP (Preparation)

(prepn. and polymn. of macromonomer, for photoconductor binder)

IT 128338-04-5P 138059-28-6P 138059-29-7P 138059-30-0P 138059-31-1P  
138059-32-2P 138059-33-3P 138059-34-4P 138059-35-5P 139357-80-5P  
139357-81-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and use of, in electrophotog. binder resin manuf.)

IT 9003-63-8DP, Butyl methacrylate polymer, reaction product with thioglycolic acid and azobiscyanovaleric acid 9011-14-7DP, reaction product with diphenylhexyllithium, carboxylic acid-**terminated** 9011-87-4DP, Methyl acrylate-methylmethacrylate copolymer, **terminated** with mercapto compd. 25609-74-9DP, Propyl methacrylate polymer, **terminated** with mercapto compd. 26634-88-8DP, Ethyl methacrylate-styrene copolymer, **terminated** with mercapto compd. 31547-85-0DP, 1-Naphthyl methacrylate polymer, **terminated** with azobiscyanovaleric acid 127939-28-0P  
128338-05-6P 128338-06-7P 138059-19-5P 138059-20-8P 138059-22-0P  
138059-26-4P 139358-02-4P 139358-03-5P 139358-05-7P 139358-07-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and use of, in electrophotog. photoconductor binder resin blend)

IT 68-11-1DP, acrylic polymer **terminated** with, preparation

70-49-5DP, acrylic polymer terminated with 75-21-8DP, Oxirane, reaction product with acrylic polymer 100-39-0DP, Benzyl bromide, reaction product with acrylic polymer 107-96-0DP, acrylic polymer terminated with 147-93-3P, Thiosalicylic acid 920-46-7DP, Methacrylic chloride, reaction product with acrylic polymer 2638-94-0DP, 4,4'-Azobis(4-cyanovaleric acid), reaction product with acrylic polymer 3375-50-6DP, acrylic polymer terminated with 3462-81-5DP, 1,1-Diphenylhexyl lithium, reaction product with acrylic polymer 13095-73-3DP, acrylic polymer terminated with 13368-25-7DP, 4-Bromomethylstyrene, reaction product with acrylic polymer 25073-94-3DP, 1,1-Diphenylbutyl lithium, reaction product with acrylic polymer 30674-80-7DP, reaction product with acrylic polymer 55428-59-6DP, acrylic polymer terminated with 91308-52-0DP, reaction product with acrylic polymer 126969-33-3DP, acrylic polymer terminated with 126969-35-5DP, acrylic polymer terminated with 135368-34-2DP, acrylic polymer terminated with 135368-35-3DP, acrylic polymer terminated with 138115-37-4P 138115-38-5P 138115-39-6P 138115-41-0P 138115-48-7P 138115-49-8P 138115-50-1P 138115-51-2P 138232-66-3P 138232-69-6P 139358-08-0P 139358-09-1P 139358-10-4P 139358-11-5P 139358-12-6P 139358-13-7P 139358-14-8P 139358-15-9P 139358-16-0P 139358-17-1P 139358-18-2P 139358-19-3P 139358-20-6P 139358-21-7P 139358-22-8P 139358-23-9P 139358-24-0P 139358-26-2P 139358-27-3P 139406-19-2P 139406-20-5P 139490-46-3P 139490-47-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and use of, in resin blend for electrophotog. photoconductor binder)

L19 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1992:130722 CAPLUS

DN 116:130722

TI Controllable radiation-curable photoiniferter-containing adhesives and their use in attachment of microelectronic devices

IN Ali, Mahfuza B.; Pujol, Jean Marc

PA Minnesota Mining and Mfg. Co., USA

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09J201-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 449619	A2	19911002	EP 1991-302706	19910327
	EP 449619	A3	19920513		
	EP 449619	B1	19960124		
	R: DE, FR, GB, IT, NL				
	CA 2038117	AA	19910930	CA 1991-2038117	19910312
	JP 07090227	A2	19950404	JP 1991-64286	19910328
	US 5356947	A	19941018	US 1992-968251	19921029
PRAI	US 1990-501273		19900329		

AB Radiation-curable title adhesives, useful for mounting microelectronic devices onto transparent wiring boards, comprise a polymer I(BT)<sub>n</sub> [I = free radical initiator portion of iniferter I(T)<sub>n</sub>; T = terminator portion of the iniferter; n .gtoreq.1; and B = functionalized thermoplastic polymer block having a glass transition temp. (T<sub>g</sub>) 10-130.degree.]. The thermoplastic adhesives can be cured in a stepwise manner by intermittent controlled radiation. Thus, glycidyl acrylate-Me methacrylate copolymer contg. xylylene bis(N,N-diethyldithiocarbamate) iniferter was functionalized with acrylic acid in the presence of Cr octanoate and alkyl phenols to give an adhesive. The adhesive was applied to a glass chip, bonded to a glass slide, and irradiated at 180.degree. by UV rays showing shear strength 11.1 MPa and insoly. in AcOEt. All the iniferter-contg. adhesives surpassed the min. bond strength of 6 MPa required for the attachment of

microelectronic devices.

ST adhesive thermoplastic photoiniferter contg; UV curable thermoplastic adhesive; microelectronic device curable thermoplastic adhesive; polyacrylate adhesive photoiniferter contg

IT Electric circuits  
(adhesives for flip chip, radiation-curable photoiniferter-contg. compns. as)

IT Vinyl acetal polymers  
RL: USES (Uses)  
(isocyanoethyl methacrylate-functionalized, photoiniferter-contg., adhesives, for microelectronic devices)

IT Vinyl acetal polymers  
RL: USES (Uses)  
(butyrals, photoiniferter-contg., adhesives, for microelectronic devices)

IT Adhesives  
(radiation-curable, photoiniferter-contg., adhesives, for microelectronic devices)

IT 79-10-7D, 2-Propenoic acid, polymers with acrylic monomers, functionalized 868-77-9D, polymers with acrylic monomers, functionalized 29931-28-0D, Glycidyl acrylate-methyl methacrylate copolymer, acrylic acid-functionalized 30674-80-7D, polymers with acrylic monomers, functionalized 139570-61-9D, Glycidyl acrylate-isooctyl acrylate-methyl methacrylate copolymer, acrylic acid-functionalized 139591-95-0D, hydroxyethyl methacrylate-functionalized 139591-96-1D, hydroxyethyl methacrylate-functionalized  
RL: USES (Uses)  
(photoiniferter-contg., adhesives, for microelectronic devices)

L19 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1990:407711 CAPLUS

DN 113:7711

TI Acrylic **block** copolymer pressure-sensitive adhesives for adhesive tapes

IN Ali, Mahfuza B.; Andrus, Milton H.

PA Minnesota Mining and Mfg. Co., USA

SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09J153-00

ICS C08F293-00

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 349270	A2	19900103	EP 1989-306516	19890627
	EP 349270	A3	19910109		
	EP 349270	B1	19940824		
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	AU 8935239	A1	19900104	AU 1989-35239	19890526
	AU 614140	B2	19910822		
	JP 02103277	A2	19900416	JP 1989-165152	19890627
	ZA 8904874	A	19910327	ZA 1989-4874	19890627
	ES 2057127	T3	19941016	ES 1989-306516	19890627
	BR 8903178	A	19900213	BR 1989-3178	19890628
PRAI	US 1988-212594		19880628		

AB Pressure-sensitive adhesives for adhesive tapes comprise 100 parts **block** copolymer having general formula I(BAT)<sub>n</sub> [I = free radical initiator portions of an iniferter, T = termination portion of the iniferter, B = elastic acrylic polymer **block** having glass-transition temp. (T<sub>g</sub>) .ltoreq.0.degree., A = thermoplastic polymer **block** having T<sub>g</sub>.gtoreq. 30.degree.] and 0-150 parts tackifiers. Thus, poly(mg. 7 g isooctyl acrylate with 2 g Me methacrylate in 11 g AcOEt in the presence of 0.02 g xylenebis(N,N-diethyldithiocarbamate) photoiniferter under N and UV radiation gave a **triblock** copolymer with **endblocks** having higher

Tg and **midblocks** having lower Tg, intrinsic viscosity 0.47 dL/g, and adhesion 63 N/100 mm.

ST **triblock** copolymer pressure sensitive adhesive; isooctyl acrylate **triblock** copolymer adhesive; methyl methacrylate **triblock** copolymer adhesive

IT Adhesive tapes  
(pressure-sensitive, acrylic **block** copolymer adhesives for)

IT Adhesives  
(pressure-sensitive, acrylic **block** copolymer-tackifier, for adhesive tapes)

IT 62529-82-2, Acrylic acid-isooctyl acrylatemethyl methacrylate copolymer  
120008-26-6, Isooctyl acrylatemethyl methacrylate copolymer 127659-63-6  
127659-64-7 127715-88-2 127715-89-3 127715-90-6 127715-91-7  
127715-92-8 127748-06-5 127748-07-6 127748-08-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesives, pressure-sensitive, contg. tackifiers, for adhesive tapes)

L19 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1989:459370 CAPLUS

DN 111:59370

TI Manufacture of melt-moldable thermoplastic elastomers

IN Himori, Shunichi

PA Mitsubishi Petrochemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F293-00  
ICS C08F002-50

CC 39-4 (Synthetic Elastomers and Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63314223	A2	19881222	JP 1987-149089	19870617
OS	MARPAT 111:59370				

AB Elastomers contg. hard and soft segments, with good chem. and weather resistance, are prep'd. by polymg. monovinyl monomers using **radical initiators** having .gtoreq.1 **dithiocarbamate** groups  
SC(S)NR1R2 (R1,R2 = H, Cl-10 alkyl) to form a soft polymer segment (A) with glass temp. .ltoreq.20.degree. or a hard polymer segment (B) with glass temp. .gtoreq.50.degree., and further polymg. with .gtoreq.1 monovinyl monomers using the above segment as an initiator to form an alternate **block** of soft segment A or a hard segment B. Thus, dissolving 2.4 g p-xylenebis(N,N-**diethyldithiocarbamate**) in 553 g Bu acrylate, and irradiating with 400-W Hg lamp for 10 h gave a soft polymer segment, 240 g of which was mixed with 60 g Me methacrylate and 300 g PhMe and polymd. with UV irradiation for 10 h, producing a **block** copolymer with glass temp. -54.degree. and 104.degree., resp., for the soft and hard segments. The **block** copolymer had melt viscosity 4.4 .times. 10<sup>2</sup> P, tensile strength 135 kg/cm<sup>2</sup>, elongation 1500%, and good weather and chem. resistance, vs. 2.0 .times. 10<sup>3</sup>, 200, 1200, and bad, resp., for a com. elastomer Cariflex TR1117.

ST melt moldable thermoplastic **block** elastomer; Bu acrylate Me methacrylate elastomer; chem resistance thermoplastic **block** elastomer; weather resistance thermoplastic **block** elastomer; thiocarbamate polymn initiator **block** elastomer

IT Chemically resistant materials  
(acrylic elastomers, contg. soft and hard segment, prepn. of)

IT Rubber, synthetic  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(acrylic, **block**, prepn. of, melt-moldable, weather- and chem. resistant)

IT Polymerization catalysts  
(**block**, living, radical, thiocarbamates, in manuf. of **block** thermoplastic elastomers)

IT 3052-61-7, Benzyl-N,N-**diethyldithiocarbamate** 89964-93-2  
92687-20-2, 1,2,4,5-Tetrakis(N,N-diethyldithiocarbamylmethyl)benzene



RL: USES (Uses)

(**radical initiators**, in manuf. of **block**  
thermoplastic elastomers)

IT 108501-18-4P, Butylacrylate-methyl methacrylate **block** copolymer  
110772-34-4P, Butylacrylate-styrene **block** copolymer  
121917-48-4P 121917-49-5P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(rubber, prepn. of, melt-moldable, weather- and chem.-resistant)

L19 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 1983:54614 CAPLUS

DN 98:54614

TI Synthesis and properties of **block** copolymers of polystyrene and  
poly(2-acrylamido-2-methylpropanesulfonic acid)

AU Konishi, Hisatoshi; Shinagawa, Yoshinobu; Azuma, Atsushi; Okano, Tamon;  
Kiji, Jitsuo

CS Fac. Eng., Tottori Univ., Tottori, 680, Japan

SO Makromol. Chem. (1982), 183(12), 2941-7

CODEN: MACEAK; ISSN: 0025-116X

DT Journal

LA English

CC 35-7 (Chemistry of Synthetic High Polymers)

AB A series of A-B-A **triblock** copolymers [51121-85-8] consisting  
of poly(2-acrylamido-2-methylpropanesulfonic acid) as A **blocks**  
and polystyrene as the B **block** was synthesized by polymg.  
2-acrylamido-2-methylpropanesulfonic acid at the ends of a  
**diethyldithiocarbamate-terminated** polystyrene, in which  
the **terminal diethyldithiocarbamate** groups act as the  
**radical initiator** under photo irradiation. The heterogeneous  
character of the **block** copolymers in solutions is discussed on the  
basis of the soly. behavior and the 1H NMR spectra.

ST **block** copolymn styrene acrylamidomethylpropanesulfonic

IT Polymerization

(**block**, of acrylamidomethylpropanesulfonic acid with  
**diethyldithiocarbamate-terminated** polystyrene)

IT 51121-85-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(**triblock**, prepn. and properties of)

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FILE 'CAPLUS' ENTERED AT 13:01:35 ON 05 APR 2002

L1 1 S WO9801478/PN  
L2 1 S JP04198303/PN  
L3 1 S US6153705/PN

FILE 'DPCI' ENTERED AT 13:11:11 ON 05 APR 2002

L4 4 S US6153705/PN OR WO9801478/PN OR EP0421149/PN OR EP296850/PN O  
SEL PN.G

FILE 'CAPLUS' ENTERED AT 13:13:11 ON 05 APR 2002

L5 14 S E1-E16/PN  
L6 24799 S ?DITHIOCARBAMATE?  
L7 467411 S ?BLOCK?  
L8 773 S L6 AND L7  
L9 475513 S LIVING OR TERMIN? OR CHAIN END?  
L10 110 S L8 AND L9  
L11 168967 S BLOCK OR DIBLOCK  
L12 81 S L10 AND L11  
L13 2847 S CHLOROMETHYLATION  
L14 78 S L12 NOT L13  
L15 196 S CHLOROMETHYLATING  
L16 78 S L14 NOT L15  
L17 76 S L16 NOT L5  
L18 320074 S ?PEROXIDE? OR AIBN OR AZO OR AZOBIS? OR RADICAL INITIAT?  
L19 6 S L17 AND L18  
L20 70 S L17 NOT L19  
L21 6 S CHARMOT?/IN AND ZARD?/IN  
L22 0 S 230309094-1

=>

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS  
 AN 1993:102906 CAPLUS  
 DN 118:102906  
 TI Living radical polymerization catalysts for vinyl monomers  
 IN Osumi, Tatsuya  
 PA Sanyo Chemical Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F004-00  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 67

*all these  
 to be mentioned  
 1/4/99*

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04198303	A2	19920717	JP 1990-327394	19901127 <--
AB	Catalysts for the title use comprise R1CR2R3R4, R1COCR2R3R4, R1OCR2R3R4, R1CS2CR2R3R4, where R1 = (un)substituted aliph. hydrocarbonyl, alicyclic hydrocarbonyl, or aryl, etc., R2-4 = (un)substituted aryl. Thus, Ph3CCl reacted with BuLi to give BuCPh3 which was used to polymerize styrene.				
ST	living radical polymn vinyl; catalyst living radical polymn; butyltriphenylmethane polymn catalyst styrene				
IT	Ethers, uses Hydrocarbons, uses Ketones, uses RL: CAT (Catalyst use); USES (Uses) (catalysts, for living polymn. of vinyl monomers)				
IT	Polyamides, uses RL: USES (Uses) (with reactive substituents, catalysts, for polymn. of vinyl monomers)				
IT	Carboxylic acids, esters RL: CAT (Catalyst use); USES (Uses) (dithio-, esters, catalysts, for living polymn. of vinyl monomers)				
IT	Polymerization catalysts (living, radical, for vinyl monomers)				
IT	Alkenes, polymers RL: USES (Uses) (polymers, with reactive substituents, catalysts, for polymn. of vinyl monomers)				
IT	Urethane polymers, compounds RL: USES (Uses) (reaction products, with carbon disulfide and trichlorophenyl)methyl chloride, catalysts, for polymn. of vinyl monomers)				
IT	Polyesters, compounds RL: USES (Uses) (reaction products, with tri(methylphenyl)methylcadmium chloride, catalysts, for polymn. of vinyl monomers)				
IT	9003-53-6P, Polystyrene 9011-14-7P, Poly(methyl methacrylate) RL: IMF (Industrial manufacture); PREP (Preparation) (manuf. of, catalysts for)				
IT	75-15-0DP, Carbon disulfide, reaction products with tris(chlorophenyl)methyl chloride and polyesters 2294-94-2P, Benzyltriphenylmethane 5333-62-0P, Benzyltriphenylmethylether 6922-83-4DP, reaction products with carbon disulfide and polyesters 9003-31-0DP, Polyisoprene, hydroxy-terminated, hydrogenated, reaction products with sodium tris(sodium sulfoniumphenyl)methylate 13630-39-2P, Butyltriphenylmethane 24243-00-3P 25103-87-1DP, Adipic acid-butanediol copolymer, reaction products with tris(methylphenyl)methylcadmium chloride 96179-07-6P, Benzyltriphenylmethylketone 113652-29-2P 127739-60-0P 145317-96-0P 145317-97-1P 145317-98-2P 145317-99-3P, Methyloxycarbonyl ethyl triphenylmethylketone 145318-00-9P 145318-01-0P 145318-02-1P 145318-03-2P 145318-04-3P 145318-05-4P 145318-06-5P 145318-07-6P 145318-08-7P, Triphenylmethyl dithiobenzoate 145318-09-8P 145318-10-1P 145318-11-2P 145318-12-3P 145318-15-6DP, reaction products with adipic acid-butanediol copolymer 146122-63-6DP, reaction				

products with carbon disulfide and tris(chlorophenyl)methyl chloride  
 146122-65-8P, Ethylene-propylene-triphenylmethoxyethyl maleimide copolymer  
 146122-67-0P 146122-69-2P 146122-71-6P 146167-48-8P 146242-58-2P,  
 Polypropylene glycol diphenyldithiocarbamate  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (manuf. of, for catalysts, for living polymn. of vinyl monomers)

IT 13248-51-6  
 RL: RCT (Reactant)  
 (reaction of, with benzylmagnesium bromide)

IT 76-83-5, Triphenylmethyl chloride 6922-83-4  
 RL: RCT (Reactant)  
 (reaction of, with butyllithium)

IT 145318-14-5  
 RL: RCT (Reactant)  
 (reaction of, with cyanoacetic bromide)

IT 6068-70-8 145318-13-4  
 RL: RCT (Reactant)  
 (reaction of, with dibutylcadmium)

IT 3431-67-2, Dibutylcadmium 17051-04-6, Dibenzylcadmium  
 RL: RCT (Reactant)  
 (reaction of, with triphenylacetic acid chloride)

IT 109-72-8, Butyl lithium, reactions 1589-82-8, Benzylmagnesium bromide  
 3682-36-8, Sodium dithiobenzoate 10604-71-4 18888-95-4, Sodium  
 dodecylate 20194-18-7 145319-92-2 145319-93-3, Sodium dithiolaurate  
 145319-94-4  
 RL: RCT (Reactant)  
 (reaction of, with triphenylmethyl chloride)

IT 88870-87-5, Ethylenebismagnesium bromide  
 RL: RCT (Reactant)  
 (reaction of, with tris(chlorophenyl)methyl chloride)

IT 145319-95-5  
 RL: RCT (Reactant)  
 (reaction of, with tris(nitrophenyl)methyl chloride)

IT 13556-27-9, Pentanedioyl dibromide 105041-08-5, 2-Cyanoacetic acid  
 bromide  
 RL: RCT (Reactant)  
 (reaction of, with tris(nitrophenyl)methylmagnesium bromide)

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L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS  
 AN 1999:27871 CAPLUS  
 DN 130:82018  
 TI Block polymer synthesis by controlled radical polymerization  
 IN Corpart, Pascale; Charmot, Dominique; Biadatti, Thibaud; Zard, Samir;  
 Michelet, Daniel  
 PA Rhodia Chimie, Fr.  
 SO PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 IC ICM C08F293-00  
 ICS C08F002-38; C07C329-16  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9858974	A1	19981230	WO 1998-FR1316	19980623
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	FR 2764892	A1	19981224	FR 1997-7764	19970623
	FR 2764892	B1	20000303		
	AU 9883425	A1	19990104	AU 1998-83425	19980623
	AU 740771	B2	20011115		
	ZA 9805450	A	19990106	ZA 1998-5450	19980623
	EP 991683	A1	20000412	EP 1998-933688	19980623
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI			
	BR 9810289	A	20000919	BR 1998-10289	19980623
	US 6153705	A	20001128	US 1999-214880	19990114 <--
	NO 9906389	A	20000223	NO 1999-6389	19991222
PRAI	FR 1997-7764	A	19970623		
	WO 1998-FR1316	W	19980623		

AB Block copolymers are formed by contacting an ethylenically unsatd. monomer  $CY'Y' (=CW-CW')a=CH_2$ , a precursor  $R_2Z_2C(S)Z_1[CX'X'(CV:CV')bCH_2]nR_1$ , and a radical polymn. catalyst, where  $R_1$  and  $R_2$  are org. groups;  $V, V', W$ , and  $W'$  are H, alkyl, or halogen;  $X, X', Y$ , and  $Y'$  are H, OH,  $NH_2$ , halogen, or an org. group;  $Z_1 = S$  or  $P$ ;  $Z_2 = O, S$ , or  $P$ ;  $a$  and  $b$  are 0 or 1; and  $n$  is .gtoreq.1. Thus, reaction of  $BrCHMeCO_2Et$  with  $EtOC(S)SK$  gave  $EtOC(S)SCHMeCO_2Et$  (I); heating 20 mmol Me acrylate with 1 mmol I in the presence of 0.02 mmol lauroyl peroxide at 80.degree. for 45 min gave a precursor homopolymer, which was heated with 20 mmol styrene and 0.02 mmol lauroyl peroxide at 110.degree. for 6 h to give a block copolymer with no.-av. mol. wt. 4650 and polydispersity 1.6.

ST block copolymer prepn living radical polymn; xanthate end group radical block copolymer

IT Radical polymerization

(living; block copolymer synthesis by controlled radical polymn.)

IT Block polymerization

Living polymerization

(radical; block copolymer synthesis by controlled radical polymn.)

IT 111740-42-2P, Methyl acrylate-styrene block copolymer 114397-35-2P, Ethyl acrylate-styrene block copolymer 127972-36-5P, tert-Butyl acrylate-styrene block copolymer 172905-57-6P, Butyl acrylate-ethyl acrylate block copolymer 218966-84-8P, Ethyl acrylate-vinyl acetate block copolymer 218966-85-9P, tert-Butyl acrylate-ethyl acrylate block copolymer 218966-86-0DP, tert-Butyl acrylate-vinyl acetate block copolymer, hydrolyzed 218966-86-0P, tert-Butyl acrylate-vinyl acetate block copolymer 218966-87-1P, tert-Butyl acrylate-ethyl acrylate-styrene block copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(block copolymer synthesis by controlled radical polymn.)

IT 60-12-8, Phenethyl alcohol 75-84-3 78-67-1, AIBN 105-65-7  
 124-76-5, Isoborneol 140-89-6 502-55-6 535-11-5, Ethyl  
 .alpha.-bromopropionate 585-71-7, (1-Bromoethyl)benzene 623-25-6,  
 .alpha.,.alpha.'-Dichloro-p-xylene 4773-33-5, Ethyl .alpha.-  
 chlorophenylacetate 14064-10-9, Diethyl chloromalonate 14160-07-7  
 42010-10-6, Azobisvaleronitrile 84938-90-9 96942-15-3, Potassium  
 O-phenethyl xanthate 218966-76-8  
 RL: RCT (Reactant)

(block copolymer synthesis by controlled radical polymn.)

IT 73232-07-2P 123972-86-1P 133256-15-2P 218966-74-6P 218966-75-7P  
 218966-77-9P 218966-78-0P 218966-79-1P 218966-80-4P 218966-81-5P  
 218966-82-6P 218966-83-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(initiator; block copolymer synthesis by controlled radical polymn.)

IT 9003-01-4DP, Poly(acrylic acid), xanthate-terminated 9003-20-7DP,  
 Poly(vinyl acetate), xanthate-terminated 9003-21-8DP, Poly(methyl  
 acrylate), xanthate-terminated 9003-32-1DP, Poly(ethyl acrylate),  
 xanthate-terminated 9003-53-6DP, Polystyrene, xanthate-terminated  
 9003-77-4DP, Poly(2-ethylhexyl acrylate), xanthate-terminated  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)

(precursor; block copolymer synthesis by controlled radical polymn.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Consiglio Nazionale Delle Ricerche; EP 0582183 A 1994 CAPLUS
- (2) Fryling, C; US 2396997 A 1946 CAPLUS
- (3) Kuraray Co Ltd; EP 0348166 A 1989 CAPLUS
- (4) Okawara, M; BULLETIN OF THE TOKYO INSTITUTE OF TECHNOLOGY 1966, V78, P1
- (5) Singer, H; FASERFORSCHUNG UND TEXTIL TECHNIK 1977, V28(9), P435 CAPLUS
- (6) Suryawanshi, S; SYNTHETIC COMMUNICATIONS 1990, V20(5), P625 CAPLUS
- (7) Yoshida, H; BULLETIN OF THE CHEMICAL SOC OF JAPAN 1971, V44, P3106 CAPLUS

=>

AN 1999:451309 CAPLUS

DN 131:88318

TI Block polymer synthesis by controlled radical polymerization from dithiocarbamate compounds

IN Corpart, Pascale; Charmot, Dominique; Zard, Samir; Franck, Xavier; Bouhadir, Ghenwa

PA Rhodia Chimie, Fr.

SO PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DT Patent

LA French

IC ICM C08F293-00

ICS C08F002-38

CC 35-4 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9935177	A1	19990715	WO 1998-FR2867	19981223
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	FR 2773161	A1	19990702	FR 1997-16779	19971231
	FR 2773161	B1	20000121		
	CA 2315914	AA	19990715	CA 1998-2315914	19981223
	AU 9918831	A1	19990726	AU 1999-18831	19981223
	JP 2002500251	T2	20020108	JP 2000-527572	19981223
	WO 9935178	A1	19990715	WO 1998-FR2891	19981228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9919714	A1	19990726	AU 1999-19714	19981228
	EP 1044231	A1	20001018	EP 1998-964531	19981228
	R: DE, FR, GB				
	ZA 9811909	A	19990629	ZA 1998-11909	19981229
	ZA 9811908	A	19990630	ZA 1998-11908	19981229
PRAI	FR 1997-16779	A	19971231		
	FR 1998-9780	A	19980730		
	WO 1998-FR2867	W	19981223		
	WO 1998-FR2891	W	19981228		

AB Block copolymers with narrow mol.-wt. distribution are prepd. by controlled radical polymn. of ethylenically mono- or diunsatd. monomers consecutively in the presence initially of a dithiocarbamate R2R3NCS2R1 [I; R1 = org. group; R2, R3 = org. group with electron-withdrawing effect, or NR2R3 = heterocyclic ring]. Thus, Me2C(NH2)CH2OH was treated with NaOEt and condensed with OC(OEt)2 to give 75% 4,4-dimethyloxazolidin-2-one, which was treated consecutively with NaH in THF-DMSO, CS2, and ClCH(CO2Et)2 to give 23% I [R1 = CH(CO2Et)2, NR2R3 = 4,4-dimethyl-2-oxo-3-oxazolidinyl] (II). Polymn. of 1.06 g of a soln. comprising 4.01 g Et acrylate, 0.176 g II, and 8.8 mg AIBN at 70.degree. for 24 h, removal of unreacted monomer by evapn., addn. of 2.08 g styrene and 4.4 mg AIBN, and polymn. at 70.degree. for 40 h gave a block copolymer with Mn 20,100 and Mw/Mn 1.2.

ST radical block copolymn dithiocarbamate initiator

pd

IT Polymerization  
(block, radical; block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT Polymerization  
(living, radical; block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT Polymerization kinetics  
(radical; polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT 111740-42-2P, Methyl acrylate-styrene block copolymer 114397-35-2P, Ethyl acrylate-styrene block copolymer 127972-36-5P, tert-Butyl acrylate-styrene block copolymer 135911-78-3P, Butyl acrylate-vinyl acetate block copolymer 218966-84-8P, Ethyl acrylate-vinyl acetate block copolymer 218966-86-0P, tert-Butyl acrylate-vinyl acetate block copolymer  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT 57-13-6, Urea, reactions 75-15-0, Carbon disulfide, reactions 75-44-5, Phosgene 78-67-1, AIBN 79-22-1, Methyl chloroformate 100-61-8, N-Methylaniline, reactions 105-58-8, Diethyl carbonate 108-27-0, 5-Methyl-2-pyrrolidinone 108-91-8, Cyclohexylamine, reactions 122-39-4, Diphenylamine, reactions 124-68-5, 2-Amino-2-methyl-1-propanol 299-42-3, Ephedrin 496-15-1, Indoline 497-25-6, 2-Oxazolidinone 535-11-5, Ethyl 2-bromopropionate 5680-80-8, Serine methyl ester hydrochloride 7568-92-5, Phenylglycinol 14064-10-9, Diethyl chloromalonate 74965-31-4  
RL: RCT (Reactant)  
(block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT 5817-68-5P, Methyl cyclohexylcarbamate 26654-39-7P, 4,4-Dimethyloxazolidin-2-one 96751-61-0P 103774-40-9P 230309-92-9P 230309-93-0P 230309-94-1P 230309-95-2P 230309-96-3P 230309-97-4P 230309-98-5P 230309-99-6P 230310-00-6P 230310-01-7P 230310-02-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT 230310-03-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(block polymer synthesis by controlled radical polymn. from dithiocarbamates)

IT 9003-20-7P, Poly(vinyl acetate) 9003-21-8P, Poly(methyl acrylate) 9003-32-1P, Poly(ethyl acrylate) 9003-53-6P, Polystyrene 9011-14-7P, Poly(methyl methacrylate)  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymer synthesis by controlled radical polymn. from dithiocarbamates)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Fryling; US 2396997 A 1946 CAPLUS
- (2) Mitsubishi Petrochemical Co; EP 0296850 A 1988 CAPLUS
- (3) Okawara, M; Bulletin of the Tokyo Institute of Technology 1966, 78, P1
- (4) Phuong, L; WO 9801478 A 1998 CAPLUS
- (5) Pont, D; WO 9615157 A 1996 CAPLUS
- (6) Sanyo Chem Ind Ltd; JP 04198303 A 1992 CAPLUS
- (7) Tosoh Corp; EP 0421149 A 1991 CAPLUS

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